

Notice of Allowability

Application No.

10/713,006

Examiner

Daniel M. Sullivan

Applicant(s)

DUPRET ET AL.

Art Unit

1636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Notice of Appeal filed 26 April 2007.
2. ☒ The allowed claim(s) is/are 1,3,6,7,10-14,18,19,21.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Victoria Silcott on 16 May 2007.

The application has been amended as follows:

In the claims

Claims 8, 9, 16, 17, 22 and 23 are cancelled.

1. (Currently amended): A method of obtaining polynucleotide fragments for use in polynucleotide shuffling, comprising:

(a) obtaining a library of mutant polynucleotides from a parental polynucleotide by mutagenesis;

(b) denaturing and hybridizing said mutant polynucleotides to form heteroduplex polynucleotides;

(c) cleaving said heteroduplex polynucleotides by using proteins of a polynucleotide repair system which cleave mismatched base pairs; and

(d) denaturing said cleaved heteroduplex polynucleotides to obtain said polynucleotide fragments; and

(e) recovering said polynucleotide fragments,

wherein before exposing said heteroduplex polynucleotide to said polynucleotide repair system, formation of said heteroduplex polynucleotide is promoted by increasing the number of the parent polynucleotides in said library relative to other polynucleotides in said library.

6. (Currently amended): The method of claim 1, wherein said heteroduplex polynucleotide is polynucleotides are generated from a native gene by successive directed mutagenesis, by error-prone PCR, by random chemical mutagenesis, or by in vivo random mutagenesis.

14. (Currently amended): The method of claim 1, wherein ~~exposing said heteroduplex polynucleotide to said~~ using proteins of a polynucleotide repair system comprises incubating said

Art Unit: 1636

~~parental-heteroduplex~~ polynucleotide with phage T4 endonuclease VII, phage T7 endonuclease I, or a combination of enzymes thereof.

18. (Currently amended): The method of claim 1, wherein said heteroduplex ~~polynucleotide~~ comprises polynucleotides comprise dITP or uracil-containing DNA.

19. (Original): The method of claim 1, wherein said heteroduplex ~~polynucleotide~~ comprises polynucleotides comprise a heteroduplex between DNA and RNA.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel M. Sullivan whose telephone number is 571-272-0779.

The examiner can normally be reached on Monday through Friday 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Woitach, Ph.D. can be reached on 571-272-0739. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel M. Sullivan/
Primary Examiner
Art Unit 1636